Freeform Search

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Term: L24 same l10

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Search History

DATE: Wednesday, April 21, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ			
L25	L24 same l10	33	L25
L24	L23 with l8	252	L24
L23	l12 with l5	5340	L23
L22	oral and l21	563	L22
L21	l20 and l19	565	L21
L20	pill or capsule or tablet	311253	L20
L19	l18 and intestinal	569	L19
L18	L17 and l16	733	L18
L17	blood stream or bloodstream or blood or GI tract	396435	L17
L16	l14 and l10	759	L16
L15	L14 same l10	42	L15
L14	L13 same l8	874	L14
L13	L12 with l7	5340	L13
L12	gut or oral or stomach or intestinal or GI tract	264207	L12
L11	L10 and l9	1560	L11

L10	dna vaccine or gene therapy	42171	L10
L9	L8 same l7	1997	L9
L8	tablet or pill or capsule or microcapsule or microparticle or polymer or microsphere	2008445	L8
L7	L6 with l5	36792	L7
L6	naked or constructed or gut or oral or stomach or intestinal or GI tract	1862206	L6
L5	dna or plasmid or polynucleotide or nucleic	245752	L5
L4	6258789	46	L4
L3	oral and l2	21	L3
L2	6225290	21	L2
L1	20020042383	2	L1

END OF SEARCH HISTORY

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L3: Entry 20 of 21 File: USPT May 1, 2001

US-PAT-NO: 6225290
DOCUMENT-IDENTIFIER: US 6225290 B1
**** See image for Certificate of Correction ****

TITLE: Systemic gene therapy by intestinal cell transformation

DATE-ISSUED: May 1, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
German; Michael	San Francisco	CA		
Goldfine; Ira D.	Kentfield	CA		
Rothman; Stephen S.	Berkeley	CA		

US-CL-CURRENT: 514/44; 435/320.1, 435/455, 435/458

CLAIMS:

What is claimed is:

1. A method for reducing blood glucose levels in a hyperglycemic mammal, the method comprising:

introducing a formulation directly into the gastrointestinal tract lumen of a hyperglycemic mammalian subject, the formulation comprising a DNA construct not packaged in a viral particle, wherein the construct encodes a functionally active insulin polypeptide that mediates reduction of blood glucose levels following introduction into the bloodstream, and wherein said DNA construct enters an intestinal epithelial cell and the encoded insulin polypeptide is expressed and delivered into the bloodstream of the mammal in an amount effective to reduce blood glucose levels.

2. The method of claim 1, wherein blood glucose levels are reduced for a period of at least about 24 hours.

3. The method of claim 1, wherein the functionally active insulin polypeptide is delivered to the bloodstream for a period of from about two to four days.

4. The method of claim 1, wherein blood glucose levels are within a normal range of blood glucose levels for a period of at least about 48 hours.

5. The method of claim 1, wherein the blood glucose levels are reduced to blood glucose levels within a normal range of blood glucose levels.

6. The method of claim 1, wherein the gastrointestinal cell is other than an intestinal stem cell.

7. The method of claim 1, wherein the gastrointestinal cell is within the small intestine.

8. The method of claim 1, wherein the gastrointestinal cell is a cell within the large intestine.

9. The method of claim 1, wherein said introducing is by oral administration.

10. A method of reducing blood glucose levels in a hyperglycemic mammal to a normal blood glucose level, the method comprising:

introducing a formulation directly into the gastrointestinal tract lumen of a hyperglycemic mammal, the formulation comprising a DNA construct not packaged in a viral particle, wherein the construct encodes a functionally active insulin polypeptide that mediates reduction of blood glucose levels following introduction into the bloodstream, and wherein said DNA construct enters an intestinal epithelial cell and the encoded insulin polypeptide is expressed and delivered into the bloodstream of the mammal in an amount effective to reduce blood glucose levels in the hyperglycemic mammal to a normal blood glucose level.

11. The method of claim 10, wherein blood glucose levels are reduced to a normal blood glucose level for a period of at least about 24 hours.

12. The method of claim 10, wherein blood glucose levels are within a normal range of blood glucose levels for a period of at least about 48 hours.

13. The method of claim 9, wherein the functionally active insulin polypeptide is delivered to the bloodstream for a period of from about two to four days.

14. The method of claim 10, wherein said introducing is by oral administration.

L4: Entry 45 of 46 File: USPT Jul 10, 2001

US-PAT-NO: 6258789
DOCUMENT-IDENTIFIER: US 6258789 B1

TITLE: Delivery of gene products by intestinal cell expression

DATE-ISSUED: July 10, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
German; Michael	San Francisco	CA		
Goldfine; Ira D.	Kentfield	CA		
Rothman; Stephen S.	Berkeley	CA		

US-CL-CURRENT: 514/44; 435/320.1, 435/455, 435/458

CLAIMS:

What is claimed is:

1. A method of delivering a secreted protein into the bloodstream of a mammalian subject, the method comprising:

introducing into the gastrointestinal tract of a mammalian subject by oral administration a construct comprising a nucleic acid molecule encoding a secreted protein and a promoter sequence operably linked to the nucleic acid molecule, wherein said construct is not packaged in a viral particle, said introducing resulting in introduction of the construct into an intestinal epithelial cell, expression of the protein in the intestinal epithelial cell and secretion of the protein from the cell and into the bloodstream of the subject.

2. The method of claim 1, wherein the intestinal epithelial cell is an absorptive cell of the small intestine.

3. The method of claim 1, wherein the intestinal epithelial cell is a columnar epithelial cell of the large intestine.

4. The method of claim 1, wherein the construct is a DNA construct formulated with a lipid.

5. The method of claim 1, wherein expression of the protein in the mammalian subject is for a period of about two to three days.

First Hit Fwd Refs

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L15: Entry 20 of 42 File: USPT Mar 16, 2004

DOCUMENT-IDENTIFIER: US 6706694 B1
TITLE: Expression of exogenous polynucleotide sequences in a vertebrate

Other Reference Publication (9):
Chen, S.C., et al., "Protective Immunity Induced by Oral Immunization with a Rotavirus DNA Vaccine Encapsulated in Microparticles," J. Virol. 72:5757-5761, American Society for Microbiology (Jul. 1998).

First Hit Fwd Refs

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L15: Entry 23 of 42 File: USPT Dec 23, 2003

US-PAT-NO: 6667294
DOCUMENT-IDENTIFIER: US 6667294 B2

TITLE: Microencapsulated DNA for vaccination and gene therapy

DATE-ISSUED: December 23, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jones; David Hugh	Devizes			GB
Farrar; Graham Henry	Salisbury			GB
Clegg; James Christopher Stephen	Salisbury			GB

US-CL-CURRENT: 514/44; 424/489, 424/490, 435/320.1, 435/455

CLAIMS:

What is claimed is:

1. A synthetic composition comprising a polymer microcapsule and DNA, wherein the DNA (a) is inside the microcapsule, (b) comprises a promoter linked to a sequence coding for an immunogen, and (c) exhibits at least 25% of its pre-encapsulation activity, as assayed by transformation of competent bacteria; and wherein the microcapsule is 10 .mu.m or less in diameter.

2. The method of claim 1 wherein the DNA is plasmid DNA.

3. The method of claim 1 wherein the DNA comprises a sequence promoting transcription of the sequence coding for the immunogen.

4. The method of claim 1, wherein the composition comprises a plurality of said DNA-containing microcapsules wherein at least 50% of said microcapsules are in the size range 1 .mu.m to 10 .mu.m.

5. The method of claim 1, wherein the immunogen induces an immune response that comprises production of antibodies specific to the immunogen.

6. The method of claim 5 wherein the immune response comprises production of IgA antibodies.

7. The method of claim 1, wherein the composition comprises a pharmaceutically acceptable carrier.

8. The method of claim 7 wherein said immunogen is an immunogenic component of an organism selected from the group consisting of a virus and a bacterium.

9. The method of claim 8 wherein the immunogen is a viral protein.

10. The method of claim 1, wherein the polymer has a solubility in methylene chloride of at least 100 mg/ml.

11. The method of claim 1, wherein the microcapsule comprises supercoiled DNA.

12. The method of claim 1 wherein said immunogen elicits a T cell response.

13. The method of claim 12 wherein said T cell response is a cytotoxic T cell (CTL) response.

14. The method of claim 1 wherein said polymer comprises poly(lactide-co-glycolide)(PLG).

15. The method of claim 1, wherein the DNA in said composition retains 50-60% of the pre-encapsulation activity.

16. The method of claim 1, wherein the DNA in said composition retains up to 80% of the pry-encapsulation activity.

17. The method of claim 1, further comprising formulating the composition in the form of a dry powder.

18. The method of claim 1, wherein said polymer consists of PLG.

19. The method of claim 1, where in the polymer is selected from the group consisting of a lactide-containing polymer, a glycolide-containing polymer, and a polymer containing lactide and glycolide.

20. The method of claim 1, wherein the emulsifying speed is below 6000 rpm.

21. The method of claim 1, wherein the emulsifying speed is below 3000 rpm.

22. The method of claim 1, wherein the emulsifying speed is between 1000 and 4000 rpm.

23. A method of administering a composition to a mammal, comprising: preparing a composition according to the method of claim 7; and administering the composition to a mammal in a manner effective to elicit antibodies against the immunogen.

24. A method of inducing production of an antibody in an animal, comprising: preparing a composition according to the method of claim 5; and administering to said animal an effective amount of the composition.

25. A method of administering a nucleic acid to an animal, comprising: preparing a composition according to the method of claim 1; and introducing the composition into the animal.

26. The method of claim 25, wherein the DNA in said composition retains 50-60% of the pre-encapsulation activity.

27. The method of claim 25, wherein the DNA in said composition retains up to 80% of the pre-encapsulation activity.

28. A method of eliciting production of IgA antibodies specific for an immunogen, the method comprising: preparing a composition according to the method of claim 1; and orally administering the composition to a mammal.

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L25: Entry 11 of 33 File: PGPB Aug 8, 2002

DOCUMENT-IDENTIFIER: US 20020106798 A1
TITLE: DNA expression vectors and methods of use

Detail Description Paragraph:
[0291] Chen, S. C., Jones, D. H., Fynan, E. F., Farrar, G. H., Clegg, J. C., Greenberg, H. B., and Herrmann, J. E. (1998a). Protective immunity induced by oral immunization with a rotavirus; DNA vaccine encapsulated in microparticles. J Virol 72(7), 5757-61.

(FILE 'HOME' ENTERED AT 17:01:07 ON 21 APR 2004)

FILE 'MEDLINE, CANCERLIT, EMBASE, BIOSIS, CAPLUS, BIOTECHDS' ENTERED AT 17:01:28 ON 21 APR 2004

L1	3516813	S	NAKED PLASMID OR DNA OR NUCLEIC OR POLYNUCLEOTIDE
L2	2695522	S	ORAL OR INTESTIN? OR GI TRACT OR STOMACH
L3	1380312	S	TABLET OR CAPSULE OR MICROCAPSULE OR MICROPARTICLE OR MICROSP
L4	1197	S	L3 AND L2 AND L1
L5	267060	S	DNA VACCINE OR GENE THERAPY OR GENE TRANSFE? OR DNA DELIVERY
L6	370	S	L5 AND L4
L7	323		DUP REM L6 (47 DUPLICATES REMOVED)
L8	8260739	S	GI TRACT OR BLOOD OR BLOODSTREAM OR BLOOD STREAM OR SECRE?
L9	124	S	L8 AND L7
L10	124		DUP REM L9 (0 DUPLICATES REMOVED)

L10 ANSWER 3 OF 124 MEDLINE on STN
AN 2003612818 MEDLINE
DN PubMed ID: 14695780
TI Transfection of mEpo gene to **intestinal** epithelium in vivo mediated by **oral** delivery of chitosan-**DNA** nanoparticles.
AU Chen Jing; Yang Wu-Li; Li Ge; Qian Ji; Xue Jing-Lun; Fu Shou-Kuan; Lu Da-Ru
CS State Key Laboratory of Genetic Engineering, Institute of Genetics, School of Life Sciences, Fudan University, Shanghai 200433, China.
SO World journal of gastroenterology : WJG, (2004 Jan) 10 (1) 112-6. Journal code: 100883448. ISSN: 1007-9327.
CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200402
ED Entered STN: 20031230
Last Updated on STN: 20040212
Entered Medline: 20040211
AB AIM: To prepare the chitosan-pmEpo nanoparticles and to study their ability for transcellular and paracellular transport across **intestinal** epithelia by **oral** administration. METHODS: ICR mice were fed with recombinant plasmid AAV-tetO-CMV-mEpo (containing mEpo gene) or pCMVbeta(containing LacZ gene), whether it was wrapped by chitosan or number Its size and shape were observed by transmission electron microscopy. Agarose gel electrophoresis was used to assess the efficiency of **encapsulation** and stability against nuclease digestion. Before and after **oral** treatmant, **blood** samples were collected by retro-orbital puncture, and hematocrits were used to show the physiological effect of mEpo. RESULTS: Chitosan was able to successfully wrap the plasmid and to protect it from DNase degradation. Transmission electron microscopy showed that freshly prepared particles were approximately 70-150 nm in size and fairly spherical. Three days after fed the chitosan-pCMVbeta complex was fed, the mice were killed and most of the **stomach** and 30% of the small **intestine** were stained. Hematocrit was not modified in naive and 'naked' mEpo-fed mice, a rapid increase of hematocrit was observed during the first 4 days of treatment in chitosan-mEpo-fed animals, reaching 60.9+/-1.2% ($P<0.01$), and sustained for a week. The second feed (6 days after the first feed) was still able to promote a second hematocrit increase in chitosan-mEpo-fed animals, reaching 65.9+/-1.4% ($P<0.01$), while the second hematocrit increase did not appear in the 'naked' mEpo-second-fed mice. CONCLUSION: **Oral** chitosan-**DNA** nanoparticles can efficiently deliver genes to enterocytes, and may be used as a useful tool for **gene transfer**.

L10 ANSWER 123 OF 124 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:544101 CAPLUS
DN 125:177462
TI Surface-modified nanoparticles and method of making and using them
IN Levy, Robert J.; Labhasetwar, Vinod; Song, Cunxian S.
PA USA
SO PCT Int. Appl., 170 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9620698	A2	19960711	WO 1996-US476	19960104
	WO 9620698	A3	19980122		
	W: AL, AM, AT, AU, CA, CH, CN, CZ, DE, DK, GB, HU, IS, JP, KE, LU, VN, MN, NO, US				
	RW: KE, LS, SD, AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, PT, SE, NL, MR, NE, SN				
	CA 2207961	AA	19960711	CA 1996-2207961	19960104
	AU 9647556	A1	19960724	AU 1996-47556	19960104
	EP 805678	A1	19971112	EP 1996-903476	19960104
	EP 805678	B1	20031029		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
	JP 10511957	T2	19981117	JP 1996-521279	19960104
	AT 252894	E	20031115	AT 1996-903476	19960104
PRAI	US 1995-369541	A	19950105		
	US 1995-389893	A	19950216		
	WO 1996-US476	W	19960104		

AB Biodegradable controlled-release nanoparticles as sustained release bioactive agent delivery vehicles include surface modifying agents to target binding of the nanoparticles to tissues or cells of living systems, to enhance **nanoparticle** sustained release properties, and to protect **nanoparticle**-incorporated bioactive agents. Unique methods of making small (10 nm to 15 nm, and preferably 20 nm to 35 nm) nanoparticles having a narrow size distribution which can be surface-modified after the nanoparticles are formed is described. Techniques for modifying the surface include a lyophilization technique to produce a phys. adsorbed coating and epoxy-derivatization to functionalize the surface of the nanoparticles to covalently bind mols. of interest. The nanoparticles may also comprise hydroxy-terminated or epoxide-terminated and/or activated multiblock copolymers, having hydrophobic segments which may be polycaprolactone and hydrophilic segments. The nanoparticles are useful for local intravascular administration of smooth muscle inhibitors and antithrombogenic agents as part of interventional cardiac or vascular catheterization such as a balloon angioplasty procedure; direct application to tissues and/or cells for **gene therapy**, such as the delivery of osteotropic genes or gene segments into bone progenitor cells; or **oral** administration in an enteric **capsule** for delivery of protein/peptide based vaccines.

L10 ANSWER 121 OF 124 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
AN 1997-06900 BIOTECHDS
TI Treatment of prevention of epithelial cell damage; platelet-derived growth factor, keratinocyte growth factor, insulin-like growth factor and/or insulin-like growth factor binding protein expression; use as vulnerary or in **gene therapy**
AU Williams L T
PA Chiron
LO Emeryville, CA, USA.
PI WO 9713857 17 Apr 1997
AI WO 1996-US15623 27 Sep 1996
PRAI US 1996-719742 25 Sep 1996; US 1995-5075 11 Oct 1995
DT Patent
LA English
OS WPI: 1997-235893 [21]
AB A new pharmaceutical composition for epithelium tissue repair contains a 1st protein with activity of platelet-derived growth factor (PDGF, A-chain or B-chain) and a 2nd protein with the activity of keratinocyte growth factor (KGF). The proteins may be produced by expression from **DNA** in a bacterium, yeast, mammal or insect cell host. The protein composition or encoding **DNA** may be used therapeutically, by administration to skin, gastric lining or **intestinal** lining, by a local, **oral**, i.d., s.c., i.l., i.g. or i.p. route, to repair or prevent epithelial cell damage. The 2 **DNA** sequences may be expressed as protein **secretion** signal peptide fusion proteins, and may be present on the same plasmid vector or separate plasmids, optionally **encapsulated** in a liposome. A somatomedin-C or insulin-like growth factor-2 gene or protein, and/or an insulin-like growth factor binding protein-1, -2, -3, -4, -5 or -6 gene or protein, may also be included. The compositions provide greatly improved therapy or prevention of epithelial cell damage, as compared to individual components alone. (46pp)

L10 ANSWER 119 OF 124 MEDLINE on STN
AN 1998285732 MEDLINE
DN PubMed ID: 9621034
TI Protective immunity induced by **oral** immunization with a rotavirus **DNA vaccine encapsulated** in microparticles.
AU Chen S C; Jones D H; Fynan E F; Farrar G H; Clegg J C; Greenberg H B; Herrmann J E
CS Division of Infectious Diseases and Immunology, University of Massachusetts Medical School, Worcester, Massachusetts 01655, USA.
NC R01 AI39637 (NIAID)
R41 AI40449 (NIAID)
SO Journal of virology, (1998 Jul) 72 (7) 5757-61.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199807
ED Entered STN: 19980713
Last Updated on STN: 19980713
Entered Medline: 19980701
AB **DNA** vaccines are usually given by intramuscular injection or by gene gun delivery of **DNA**-coated particles into the epidermis. Induction of mucosal immunity by targeting **DNA** vaccines to mucosal surfaces may offer advantages, and an **oral** vaccine could be effective for controlling infections of the gut mucosa. In a murine model, we obtained protective immune responses after **oral** immunization with a rotavirus VP6 **DNA vaccine encapsulated** in poly(lactide-coglycolide) (PLG) microparticles. One dose of vaccine given to BALB/c mice elicited both rotavirus-specific serum antibodies and **intestinal** immunoglobulin A (IgA). After challenge at 12 weeks postimmunization with homologous rotavirus, fecal rotavirus antigen was significantly reduced compared with controls. Earlier and higher fecal rotavirus-specific IgA responses were noted during the peak period of viral shedding, suggesting that protection was due to specific mucosal immune responses. The results that we obtained with PLG-**encapsulated** rotavirus VP6 **DNA** are the first to demonstrate protection against an infectious agent elicited after **oral** administration of a **DNA vaccine**.

L10 ANSWER 120 OF 124 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN

L10 ANSWER 117 OF 124 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
AN 1998-07239 BIOTECHDS
TI Intraluminal stent for delivering **nucleic** acid in viral vector; adeno virus or retro virus vector delivery using stent, for therapy
AU Donovan M G; Stein P M
PA Medtronic
LO Minneapolis, MN, USA.
PI EP 841040 13 May 1998
AI EP 1997-308983 7 Nov 1997
PRAI US 1996-746404 8 Nov 1996
DT Patent
LA English
OS WPI: 1998-252692 [23]
AB A new intraluminal stent consists of a lumen wall contacting surface, a lumen exposed surface, a **polymer** composition containing fibrin covering at least part of the lumen wall contacting surface of the stent, and a virus to deliver a **nucleic** acid (I) to a cell. The virus is associated with the covering of the **polymer** composition on the lumen wall contacting surface. Also claimed are kits consisting of the stent virus loading solution and container to house the stent during application of the virus solution, and a virus delivery composition consisting of fibrin **polymer** and virus. The stent may be used to deliver **nucleic** acids to lumen walls in **blood** vessels, lymph vessels, **intestine** or respiratory airway, and is introduced using a catheter or by surgery. It may be used in the treatment of e.g. stenosis, myocardial infarction, aneurysm, atherosclerosis, muscular dystrophy, cystic fibrosis, digestive disorders, cancer, colitis and benign prostatic hypertrophy. The virus is preferably adeno virus or retro virus and expresses a protein in the cells. (18pp)

L10 ANSWER 112 OF 124 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:798287 CAPLUS
TI Transfection of Caco-2 cells by PLGA-nanoparticles.
AU Zhou, Wen-Zhong; Labhasetwar, Vinod
CS Pharmaceutical Sciences, University of Nebraska Medical Center, Omaha, NE, 68198, USA
SO Abstracts of Papers - American Chemical Society (2000), 220th, POLY-194
CODEN: ACSRAL; ISSN: 0065-7727
PB American Chemical Society
DT Journal; Meeting Abstract
LA English
AB Epithelial cells of the gastrointestinal (**GI**) **tract** may be an attractive target for somatic **gene therapy** for many congenital disorders and also for correction of various metabolic disorders. In this study, we have determined the transfectivity of biodegradable nanoparticles in Caco-2 cells, a cell culture model for GI epithelium. Nanoparticles containing a plasmid **DNA** (firefly luciferase gene) were formulated using a biodegradable **polymer**, polylactic polyglycolic acid copolymer (PLGA, 50:50). The results demonstrated a **DNA** loading of 1.21 % (weight/weight) in nanoparticles with entrapment efficiency of 34%. The transfection studies in Caco-2 cells showed luciferase gene expression at 2 days post transfection, which then gradually declined with time. Furthermore, a **nanoparticle** dose-dependent increase in the level of transfection was observed Thus, nanoparticles could be used as an effective gene delivery system for **oral gene therapy**.